



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
P.O. BOX 4970  
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO  
ATTENTION OF

Planning Division  
Environmental Branch

JUL 21 2008

Mr. Jeff Gratz  
Clean Water Regulatory Branch  
Division of Environmental Planning and Protection  
U.S. Environmental Protection Agency, Region II  
25<sup>th</sup> Floor, 290 Broadway  
New York, New York 10007-1866

Dear Mr. Gratz:

Enclosed are the "Evaluation of Dredged Material Proposed for Ocean Disposal, San Juan Harbor", final report dated April 2008, and the U.S. Army Corps of Engineers' (Corps) evaluation for this report in accordance with Section 103 of the Marine Protection, Research and Sanctuaries Act (MPRSA) of 1972 and the criteria published in 40 CFR Parts 220-228.

The Corps has completed the evaluation of the sediments from the San Juan Harbor, San Juan Puerto Rico. The Quality Assurance Project Plan for this work was developed in accordance with the Environmental Protection Agency's Region 2, "Guidance for Performing Test on Dredge Material Proposed for Ocean Disposal", dated December 1992, the "Evaluation of Dredged Material proposed for Ocean Disposal-Testing Manual", otherwise called the 1991 Green Book, and with the cooperation of your staff.

All phases of this work were coordinated with your staff prior to implementation. The Corps evaluated Tiers II and III for this project. Based on the results from this report, we have determined that the dredge material from San Juan Harbor continues to be suitable for ocean disposal in accordance with the MPRSA in the San Juan Ocean Dredged Material Disposal Site.

Please review our report and evaluation and provide a letter of concurrence for ocean disposal of the dredge material specified in the enclosed 103 evaluation. If you need additional information please contact Mr. Ivan Acosta at 904-232-1693 by e-mail at [Ivan.Acosta@usace.army.mil](mailto:Ivan.Acosta@usace.army.mil), or Mr. Javier Cortes at 904-232-1896 by e-mail at [Javier.Cortes@usace.army.mil](mailto:Javier.Cortes@usace.army.mil).

Sincerely,

Rebecca S. Griffith, Ph.D, PMP  
Chief, Planning Division

Enclosures

Copy furnished (w. encl):

Mr. Mark Reiss, Division of Environmental Planning and Protection, U.S. Environmental  
Protection Agency, Region II, 25<sup>th</sup> Floor, 290 Broadway, New York, New York 10007-1866

## **San Juan Harbor**

### **Section 103 Ocean Disposal Evaluation Report**

- I. Purpose of this document:** The purpose of this evaluation is to comply with Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA) and to obtain Section 103 concurrence for disposal of dredged material from the San Juan Harbor into the San Juan Harbor Ocean Dredged Material Disposal Site (ODMDS). The evaluation main objective is to determine the suitability of the sediments from the San Juan Harbor for ocean disposal in the San Juan ODMDS as discussed in "Evaluation of Dredged Material Proposed for Ocean Disposal, San Juan Harbor", final report dated April 2008. The Jacksonville District of the U.S. Army Corps of Engineers, coordinated all phases of this project with staff of the U.S. Environmental Protection Agency (EPA), Region II, using EPA's Region 2, "Guidance for Performing Test on Dredge Material Proposed for Ocean Disposal", dated December 1992, and the "Evaluation of Dredged Material proposed for Ocean Disposal-Testing Manual", otherwise called the 1991 Green Book.

This work is a continuation of previous evaluations for ocean disposal of dredged material done for San Juan Harbor in 1993, 1994, 1995, 1996, 1999, and 2005 as such is not a stand alone project.

- II. Description of action:** The U.S. Army Corps of Engineers (COE) is charged with maintaining and preserving our waterways for economical development and for national security. San Juan Harbor represents an important access port to the U.S. and Puerto Rico economy. The harbor requires maintenance each three to four years to maintain operations as usual.
- III. Description of the harbor:** The San Juan Harbor features; a large natural bay protected from ocean waves and currents but well flushed. Entrance to the harbor is between the Isla De Cabras and Punta del Morro. Passage is provided via the Bar Channel. The area surrounding the harbor is relatively low and level but with a series of hills and ridges that surrounds the area. Several rivers, channels, and ditches receive runoff from surrounding land and drain into the San Juan Harbor. With the exception of the channel system and anchorages, most of the San Juan harbor is shallow, averaging about 10 feet deep. The harbor is completely surrounded by urban and industrial development. There is a large marshalling area for containerized freight and auto shipping, warehouses and petroleum distribution facilities in the South part of the harbor. Southeast of the marshalling area is a landfill and immediately south of the landfill the Puerto Nuevo River curves north and discharges into the harbor at the east end of the Puerto Nuevo Channel.
- IV. Description of the ocean disposal site:** The disposal site is the San Juan Ocean Dredged Material Disposal Site. This site is located approximately 1.5 miles offshore from the Island of Puerto Rico near San Juan Harbor and is designated for the disposal of dredged material. The site is one square mile with center coordinates of 18°30'40"N, 66°09'00"W and is in water approximately 140 fathoms (840 feet) deep.

**V. Description of dredged material:** Samples collected for this evaluation were mostly clay, some silt, traces of fine sand and shell fragments, and dark to greenish gray color (please see Appendix B of the report).

**VI. Environmental testing results:** The sampling of the San Juan harbor was split into two testing reaches (Reach A = SJH06-A and Reach = SJH06-B) as well as one offshore reference sample, near the location designated by EPA Region II, used for comparison in chemistry and toxicological tests. The samples within the project areas were collected from locations and depths coinciding with the dredging prism. Reach A, was a composite of eight subsamples; the second test sample, Reach B, was a composite of seven subsamples; all inshore samples were taken with a vibratory coring device. The reference station was a composite of multiple grabs.

a. Elutriate Analysis.

Elutriates prepared from sediment samples, showed traces amounts of metal levels. Most of the pesticides and PCBs were not detected at or above the method detection limit (MDL) in any elutriates.

b. Sediment Analysis.

Metals: Low levels of metals were present in the sediments and varied between reaches.

Pesticides: Traces of 4,4'-DDD and 4,4'-DDT were detected in the sediments, no other pesticides were detected at or above the MDL.

PCBs: All PCBs were detected in the sediments with the exception of PCB-77 and PCB -184.

PAH's: Were found in trace levels in the sediments.

c. Tissue Analysis.

In general analysis of tissues of *Macoma nasuta* and *Nereis virens* that were exposed to San Juan sediments for bioaccumulation studies indicating that trace metals did not accumulate in the tissues of the test organisms. Similarly, pesticides and PCBs did not show elevated levels.

d. Bioassays.

Bioassays were conducted on elutriates of sediments and sediments from all samples, reference stations and control sediment. Water quality parameters were within the appropriate limits.

**VII. General compatibility of dredged material with disposal site:** Data in the report shows that dredge material from San Juan Harbor is suitable for disposal at the San Juan Ocean Dredged Material Disposal Site.

**VIII. Need for ocean disposal:** Upland disposal options in the vicinity of San Juan Harbor are very limited and inadequate for disposal of either new work or maintenance dredging. The limited upland disposal space that is available should be reserved for sediments that are not suitable for ocean disposal. For dredge material from maintenance and operation, there is no economically feasible alternative to ocean disposal.

**IX. Environmental impacts of disposal:**

- a. Aesthetics: The location and the distance offshore of the ODMDS should minimize the adverse aesthetics impact of turbidity during discharge.
- b. Recreation Resources: No adverse impacts are expected.
- c. Commercial marine resources: No commercial fishery or resources would be affected.
- d. Navigation: No adverse impacts are expected.
- e. Mineral resources: No adverse impacts are expected.
- f. Cultural resources: No adverse impacts are expected.
- g. Endangered species: No adverse impacts are expected.
- h. Water quality: There will be a temporary increase in turbidity during discharge operations. This turbidity will be short lived and limited to permissible concentrations.

**X. Determination and findings:** The dredge material from San Juan Harbor continues to be suitable for ocean disposal. This conclusion is based on the following: Additional testing in 1993, 1994, 1995, 1999, and 2005 in areas of San Juan Harbor adjacent to the area under consideration have indicated the harbor area as a whole is not contaminated. In general, the dredge material from San Juan Harbor is clean and suitable for ocean disposal in the San Juan Ocean Dredged Material Disposal Site.